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PATENT
Dkt. STL11421

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: **Clark E. Lubbers and Randy L. Roberson**
Assignee: **SEAGATE TECHNOLOGY LLC**
Application No.: **10/658,982**   Group Art Unit: **2189**
Filed: **September 10, 2003**   Examiner: **Horace L. Flournoy**
For: **ADAPTIVE MAPPING**

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPLICANT'S REMARKS FOR PRE-BRIEF REQUEST FOR REVIEW

THE OFFICE HAS NOT SUBSTANTIATED ANTICIPATION OF INDEPENDENT CLAIMS 1, 16, AND 29 BY NOT SHOWING THAT THE CITED REFERENCE DISCLOSES ALL THE FEATURES OF THOSE CLAIMS

Independent claims 1, 16, and 29 each recite a *sparse directory structure* and a *fully populated directory structure*. The following list enumerates unresolved factual issues in the record that are not bona fide matters for appeal, but which rather must be resolved before this case can be said to be ready for appeal.

1. Claim 29 explicitly recites a <u>*variable size*</u> *sparse directory structure*. The skilled artisan readily understands that Nanda '876 discloses a <u>fixed-size</u> sparse directory, because when the sparse directory in Nanda '876 becomes full it must evict an entry to make room for a new entry.[1] The Office has not substantiated any evidence that Nanda '876 discloses *a variable size sparse directory* as claimed.

2. Independent claims 1, 16, and 29 each recite both a *sparse directory structure* and a *fully populated directory structure*. Hence, all the independent claims explicitly

recite <u>two</u> directory structures. However, the skilled artisan readily understands that Nanda '876 discloses only <u>one</u> directory structure, its "sparse directory."

The Office alleges that Nanda '876 discloses the *sparse directory structure* in the following citation:[2]

> nodes is already present in the <u>sparse directory</u>, then the....
> (Nanda '876 para. [0032] line 4, emphasis added)

The Office alleges that Nanda '876 discloses the *fully populated directory structure* in the following citation:[3]

> presented. If the <u>sparse directory</u> is full, then it has to....
> (Nanda '876 para. [0032] line 10, emphasis added)

Rather than showing that Nanda '876 discloses two directory structures as claimed, the Office has only shown that Nanda '876 discloses one directory structure at two <u>states</u>; at a partially full state and at a full state. Both states exist within the <u>same</u> directory structure, that of Nanda's sparse directory. The Office has not substantiated any evidence that Nanda '876 discloses both the *sparse directory structure* and the *fully populated directory structure* as claimed.

3. Claims 1 and 16 each recite *determining said sparse directory structure is to be changed*. The Office alleges that Nanda '876 discloses this feature in the following citation:[4]

> Each node emulating a coherence directory (for example, sparse directory) in a distributed shared memory system is responsible for maintaining the cache directory of memory lines cached by the node as well as the sparse directory for maintaining the status of memory locations belonging to that node that may be in cache directories of other nodes.

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[1] Nanda '876 para. [0019] lines 16-18, para. [0032] lines 10-11.
[2] Office Action of 3/26/2007 pg. 11 last line to pg. 12 first line.
[3] Office Action of 3/26/2007 pg. 12 lines 1-2.
[4] Office Action of 3/26/2007 pg. 3 lines 2-4.

> When an entry in the sparse directory is replaced, this
> information has to be propagated to all the nodes that share
> this cache line. In real time emulation in which requests
> arrive every cycle, this makes the pipeline for every
> transaction deep, thus consuming more area and pins and
> making it difficult to maintain throughput. Thus greatly
> reduces emulation efficiency.
> (Nanda '876 para. [0017], emphasis added)

For the reasons set forth above, Nanda '876 does not disclose determining that a

directory structure is to be changed because Nanda '876 discloses only one directory

structure. The skilled artisan readily understands that replacing an entry in a directory

structure changes the directory state, not the directory structure. The Office has not

substantiated any evidence that Nanda '876 discloses *determining said sparse directory*

structure is to be changed as claimed.

4. Claims 1 and 16 each recite *reconstructing said sparse directory structure into a*

fully populated directory structure. The Office alleges that Nanda '876 discloses this

feature in the following citation:[5]

> forcibly evict an entry (say, the least used entry). As every
> node has a copy of the sparse directory belonging to
> every....
> (Nanda '876 para. [0032] lines 11-12)

For the reasons set forth above, Nanda '876 does not disclose reconstructing a

directory from one directory structure to another directory structure because Nanda '876

discloses only one directory structure. The skilled artisan readily understands that evicting

an entry from a directory structure changes the directory state, not the directory structure.

The Office has not substantiated any evidence that Nanda '876 discloses *reconstructing*

said sparse directory structure into a fully populated directory structure as claimed.

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[5] Office Action of 3/26/2007 pg. 3 lines 2-4.

During examination claims are given their "broadest reasonable interpretation consistent with the specification."[6] The "broadest reasonable interpretation" is the meaning that the skilled artisan would give to the claim term in view of the associated usage provided in the specification.[7] A construction that is <u>inconsistent</u> with the written description would not be arrived at by the skilled artisan, and is therefore not a "reasonable interpretation."[8]

The Office's claim construction generally renders the two directory structures of the claimed embodiments as being anticipated by the one directory structure at two states in Nanda '876. However, the Office has not offered any evidence to rebut Applicant's arguments that the Examiner's interpretation is entirely <u>inconsistent</u> with the usage of the terms *sparse directory structure* and *fully populated directory structure* in the specification. The Office has also not provided any evidence substantiating a reason that the skilled artisan, having read the specification, would reasonably conclude that the two claimed directory structures are anticipated by the one directory structure of Nanda '876.

The Office's claim interpretation is inconsistent with both what the skilled artisan knows fundamentally about directory structures and how he or she would view the usage of the disputed claim language in the specification, and thereby not within the broadest reasonable meaning consistent with the specification. Therefore, the Office has failed to substantiate anticipation because the cited reference does not disclose all the recited features of independent claims 1, 16, and 29.

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[6]*Phillips v. AWH Corp.,* 75 USPQ2d 1321 (Fed. Cir. 2005)(en Banc); MPEP 2111.
[7] *In re American Academy of Science Technical Center,* 70 USPQ2d 1827 (Fed. Cir. 2004); *In re Cortright,* 49 USPQ2d 1463, 1468 (Fed. Cir. 1999); *In re Morris,* 44 USPQ2d 1023 (Fed. Cir. 1997)
[8] *Phillips, supra; In re Morris, supra; In re Zletz,* 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)

Before a closing of the merits, Applicant is entitled to an evidentiary showing that the cited reference discloses all the recited features of the rejected claims. To send this case to appeal the Pre-Brief Panel must find in the underlying facts "substantial evidence" that adequately supports the Examiner's legal conclusions of anticipation. This approach is consonant with the Office's obligation to develop an evidentiary basis for its factual findings to allow for judicial review under the substantial evidence standard that is both deferential and meaningful. *see In re Lee*, 277 F.3d 1338, 1344 (Fed. Cir. 2002).

Applicant believes the Panel should decide that the Office has not substantiated a *prima facie* case of anticipation for any of the independent claims, and that the factual issues raised above must be resolved before this case is in condition for appeal. Applicant prays the Panel will agree that Applicant should not be burdened with the delay and expense of appeal until this case is actually in condition for appeal.

Respectfully submitted,

By: _____

Mitchell K. McCarthy, Registration No. 38,794
McCarthy & Associates
500 West Main, Suite 609
Oklahoma City, Oklahoma 73102
www.mccarthyiplaw.com
Telephone: (405) 601-2798
Facsimile: (405) 601-2853